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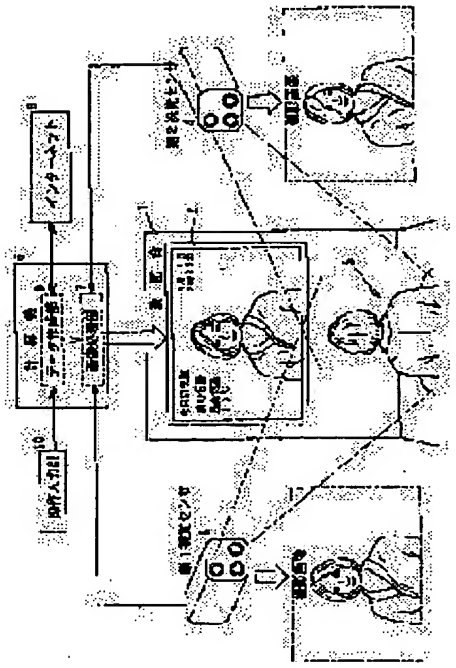
(54) DIGITAL MIRROR DEVICE

(57)Abstract:
PROBLEM TO BE SOLVED: To display out an image watched in any arbitrary direction such as an image watched from the front of a user on a monitor screen and further to display various kinds of information by processing the image data of the user photographed by a plurality of cameras located by the side of the user or the like.
SOLUTION: A monitor screen 2 is installed on the mirror install part of a washstand 1, a first visual sensor 3 and a second visual sensor 4 composed of sets of a plurality of cameras are installed on both the sides thereof, and three-dimensional image data are respectively provided and outputted to an image processing part 7. In the image processing part 7, the image watched in the specified direction of the user is formed on the basis of these image data and displayed on the monitor screen while being suitably synthesized with the information of weather or news fetched from the Internet. The image of the user can be displayed while being converted into image in any arbitrary direction or expanded image corresponding to an instruction. Besides, various kinds of information can be further displayed on the monitor screen.



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CLAIMS

[Claim(s)]
[Claim 1] Digital mirror equipment characterized by the bird clapper from the image-processing section which acquires the picture of a user's specific sense with two or more visual sensors which obtain the image data of two or more directions of a user, and the data of the aforementioned visual sensor, and the monitoring screen which displays the picture from the aforementioned image-processing section.
[Claim 2] The picture of the aforementioned user's specific sense is digital mirror equipment according to claim 1 which is a user's transverse plane and picture of right and left, and is characterized by displaying one or more of these simultaneously with directions of a user.
[Claim 3] The picture of the aforementioned user's specific sense is digital mirror equipment according to claim 1 which is the picture of a user's arbitrary angle directions and is characterized by displaying the picture of arbitrary angles with directions of a user.
[Claim 4] The aforementioned image-processing section is digital mirror equipment according to claim 1 characterized by performing enlarged display processing of the particular part of a picture, or broader-based display processing.
[Claim 5] Digital mirror equipment according to claim 1 which equips the aforementioned visual sensor with two or more cameras, compounds the picture photoed with each camera, considers as 3-dimensional image data, and is characterized by acquiring the picture of a user's specific sense by the aforementioned 3-dimensional image data from each visual sensor in the aforementioned image-processing section.
[Claim 6] Digital mirror equipment according to claim 1 characterized by transmitting the picture from the aforementioned image-processing section to other image display equipments, and displaying the picture from the image-processing section of a transmission place on the aforementioned monitoring screen.
[Claim 7] Digital mirror equipment according to claim 1 characterized by what data other than the aforementioned visual sensor are also inputted into the aforementioned image-processing section, and data other than the aforementioned visual sensor also carry out picture composition, and display on the aforementioned monitoring screen.
[Claim 8] Data other than the aforementioned visual sensor are digital mirror equipment according to claim 7 characterized by being data incorporated from the Internet.
[Claim 9] Data other than the aforementioned visual sensor are time, the weather, stocks, and digital mirror equipment according to claim 7 characterized by being any one of each of the information on mail at least.
[Claim 10] Data other than the aforementioned visual sensor are digital mirror equipment according to claim 7 which is the picture of television or video.
[Claim 11] The picture of the aforementioned video is digital mirror equipment according to claim 10 characterized by being the message voice of the aforementioned user's picture, and a user.
[Claim 12] The aforementioned visual sensor is digital mirror equipment according to claim 11 characterized by outputting the information corresponding to the user who specified the user by a user's picture and was specified in the aforementioned image-processing section.
[Claim 13] Digital mirror equipment of any one publication of the claim 1 characterized by having arranged the aforementioned monitoring screen in the mirror installation position of a washstand, or the claim 12.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] this invention compounds the picture photoed with the camera formed in right and left of bodies, such as human being's face, and relates to the digital mirror equipment which generated a picture which a mirror is installed in an objective transverse plane and is looking at this.
[0002]
[Description of the Prior Art] In human being's everyday life, a mirror is indispensable because of preparing appearance etc., for example, the mirror prepared in the washstand is used, so that you may surely say, in case almost all men use a washstand every morning for washing their face, toothbrushing, etc. Many [to those who are careful about appearance, and perform careful makeup in many cases, therefore spend about 1 hour in a washstand every day / especially in the case of a young woman]
[0003] According to statistics, those who perform polite makeup in this washstand to a shampoo about a morning 10 minutes, Although face toilet, an essence, and a milky lotion are attached to washing their face and toothbrushing for 4 minutes and 30 seconds for 10 minutes drying the hair after washing, 8 minutes, It spends for 30 seconds a total of 52 minutes, and the data of spending a total of 19 8-minute minutes attaching to washing its face of cleansing cream, the usual washing its face, etc., and attaching [of 20 minutes] face toilet and a milky lotion to toothbrushing for 3 minutes for 8 minutes are in makeup of foundation, a supercilium, an eyeliner, eye shadow, a lip stick, rouge, etc. about night.
[0004] Action of such a person's morning Therefore, when [for example,] it rises to a part for morning 8 drawing 30, Apply to a shower for 30 minutes by 9:00, and hair is dried over about 10 minutes in a washstand after that. It will apply to attaching face toilet and a milky lotion after that about 10 minutes, spare clothing will be performed over about 20 minutes from 9:20, breakfast will be taken in 20 minutes after 9:40, and the behavior pattern of making up the last from 10:00 to 10:20 will be taken daily.
[0005] Even if it is not those who spend time on appearance, such as such especially careful makeup, time for there to be a woman with time young at least to stand in front of a washstand etc. about 20 minutes, and be here in morning hurried precious time is time important also for the usual man, and to spend time here as effectively as possible is desired.
[0006]
[Problem(s) to be Solved by the Invention] As mentioned above, doing the work which prepares appearance, such as the only above makeup, in this place, although a washstand is a place important as a place which spends a certain amount of time periodically for human being cannot necessarily say that precious time is used capable. It is at the time of having just occurred and there is also no time to see a morning newspaper and the news of television in between [till then] so that the aforementioned behavior pattern may show time to stand on a morning washstand especially.
[0007] Moreover, for the above young women, selection of the clothes when going out outside is important, then, it needs to choose clothes according to future WX and future atmospheric temperature, needs to choose shoes according to it, and needs to choose other accessories. Moreover, it is necessary to choose lip stick color and eye shadow according to these clothes, and adjustment of a hairstyle etc. needs to adjust various makeup. Moreover, it is necessary to make up an ultraviolet line pair policy depending on WX at that time [in summer]. However, since the steady work of the above mornings will be done and it will stand in front of a washstand as mentioned above after only glancing at an outer situation, in order that there may almost be no opportunity to know the information on a weather report before going to a washstand, suitable makeup cannot be performed in many cases.
[0008] Not only a young woman but the usual male salaried worker of the following is the same. In spite of brush one's teeth in a washstand, washing a face, shaving a mustache, spending most time in a washstand every day and spending many of morning precious time here for work, such as having one's hair cut It cannot say that spending time only for the monotonous work of above every day is adopting

how to use effective time, but a certain information offer means is wanted for there to be here. Therefore, although taking in a weather report and the information on news, covering radio here is also performed, as for introduction of information with radio, the information to which the content was restricted and not necessarily accompanied a user's mind does not necessarily come to hand.

[0009] Though it is the function and plane mirror to which it is used only in order to only project the mirror image of its figure, taking a latus space, for example, a part is expanded, the mirror attached in the washstand on the other hand cannot perform the function which projects various figures like a three-way mirror, and cannot say that the area of the mirror of a latus washstand is not necessarily used effectively.

[0010] Therefore, this invention aims to let many people it not only to to copy its figure as it is, but make the mirror of the washstand used daily for a long time into a three-way mirror function or a means to make various functions, such as an expansion function, perform in part, and to offer various kinds of information.

[0011]

[Means for Solving the Problem] In order to solve the above-mentioned technical problem, invention concerning a claim 1 is taken as the digital mirror equipment characterized by the bird clapper from the image-processing section which acquires the picture of a user's specific sense with two or more visual sensors which obtain the image data of two or more directions of a user, and the data of the aforementioned visual sensor, and the monitoring screen which displays the picture from the aforementioned image-processing section.

[0012] moreover, invention concerning a claim 2 it is characterized by for the picture of the aforementioned user's specific sense being a user's transverse plane and picture of right and left, and displaying one or more of these simultaneously with directions of a user -- being according to claim 1 -- digital mirror equipment is carried out

[0013] Moreover, the picture of the aforementioned user's specific sense is a picture of a user's arbitrary angle directions, and invention concerning a claim 3 uses it as the digital mirror equipment according to claim 1 characterized by displaying the picture of arbitrary angles with directions of a user.

[0014] Moreover, invention concerning a claim 4 uses the aforementioned image-processing section as the digital mirror equipment according to claim 1 characterized by performing enlarged display processing of the particular part of a picture, or broader-based display processing.

[0015] Moreover, invention concerning a claim 5 equips the aforementioned visual sensor with two or more cameras, compounds the picture photoed with each camera, considers as 3-dimensional image data, and is taken as the digital mirror equipment according to claim 1 characterized by acquiring the picture of a user's specific sense by the aforementioned 3-dimensional image data from each visual sensor in the aforementioned image-processing section.

[0016] Moreover, invention concerning a claim 6 transmits the picture from the aforementioned image-processing section to other image display equipments, and is taken as the digital mirror equipment according to claim 1 characterized by displaying the picture from the image-processing section of a transmission place on the aforementioned monitoring screen.

[0017] Moreover, invention concerning a claim 7 also inputs data other than the aforementioned visual sensor into the aforementioned image-processing section, and is taken as the digital mirror equipment according to claim 1 characterized by what data other than the aforementioned visual sensor also carry out picture composition, and display on the aforementioned monitoring screen at it.

[0018] Moreover, invention concerning a claim 8 uses data other than the aforementioned visual sensor as the digital mirror equipment according to claim 7 characterized by being data incorporated from the Internet.

[0019] Moreover, invention concerning a claim 9 uses data other than the aforementioned visual sensor as time, the weather, stocks, and the digital mirror equipment according to claim 7 characterized by being any one of each of the information on mail at least.

[0020] Moreover, invention concerning a claim 10 uses data other than the aforementioned visual sensor as the digital mirror equipment according to claim 7 which is the picture of television or video.

[0021] Moreover, invention concerning a claim 11 uses the picture of the aforementioned video as the digital mirror equipment according to claim 10 characterized by being the message voice of the aforementioned user's picture, and a user.

[0022] Moreover, the aforementioned visual sensor specifies a user by a user's picture, and invention concerning a claim 12 uses it as the digital mirror equipment according to claim 11 characterized by outputting the information corresponding to the specified user in the aforementioned image-processing section.

[0023] Moreover, invention concerning a claim 13 is taken as the digital mirror equipment of any one

publication of the claim 1 characterized by having arranged the aforementioned monitoring screen in the mirror installation position of a washstand, or the claim 12.
[0024] [Embodiments of the Invention] this invention is explained based on an example. Drawing 1 is the whole schematic diagram showing the basic composition of the digital mirror equipment by this invention, is equipped with the 1st visual sensor 3 which equips with a monitoring screen 2 the portion in which the mirror in a washstand 1 was installed, and becomes the both sides from two or more video cameras etc. in the illustration example, and the 2nd same visual sensor 4, and is photoing simultaneously the user 5 who stood in front of the washstand 1. The picture photoed at this time is a picture which photoed a part for a user's slanting lateral portion respectively, and is outputting this picture to the image-processing section 7 of a computer 6 as shown under the visual sensors 3 and 4 in drawing.
[0025] In the image-processing section 7 of a computer 6, it is considering as the picture of the transverse-plane sense as shown [in / the illustration example / while obtaining 3-dimensional configuration data by the picture of two or more cameras respectively, unify the data of these whole, and] in the monitoring screen 2 in drawing in two visual sensors. It can process in a fundamental procedure as shown in drawing 2 on the occasion of such an image processing. That is, people's picture of the head neighborhood is inputted from a visual sensor (Step S1), subsequently the 3-dimensional configuration data of the head neighborhood are calculated, 3 dimensional models are created, and a texture map is carried out to this (Step S2). A specific view is set up to the 3-dimensional configuration data obtained by doing in this way by the degree, and the image data based on the view is obtained (Step S3). Thus, the created image data is displayed on a monitor (step S4). In addition, in the aforementioned step S3, it is not concerned with movement of the right-and-left upper and lower sides of a face, but this is pursued, and when the center of a view is set to specific parts, such as portions of displaying that it is located at the center of a screen by the face, and the eye of a face, it becomes possible to process creating an enlarging-or-contracting picture focusing on this part etc. Therefore, although it originally should not be reflected in the monitor display as a mirror which has a man with the small back in a high position in the usual mirror, in this equipment, this can also be displayed as a picture of front view. Such processing can be easily created with 3D image processing technique or the CG technology now.
[0026] In addition, various things can be used as the above-mentioned visual sensor, and you may make it acquire a more exact synthetic picture in the simplest form by preparing also in the upper and lower sides of a monitoring screen in addition to this, for install 2 sets of visual sensors in right and left of the aforementioned monitoring screen as shown in drawing 1 , obtain still more detailed image data and acquiring a precise synthetic picture, and processing the picture photoed with a total of four visual sensors. In addition, a more exact synthetic picture can be further acquired using many visual sensors. Moreover, although each visual sensor can obtain a stereogram image by using two or more cameras, in order to obtain more exact image data, you may use further many cameras, such as three pieces and four etc. pieces.
[0027] In the example shown in drawing 1 , the Internet 8 is connected to the computer 6, the Internet information is incorporated in the data origination section 9, data are sorted out corresponding to various demands of the user who inputted from the operation input section 10, it outputs to the image-processing section 7, picture composition is carried out to the aforementioned user's image, and this is displayed on a monitoring screen 2. In an illustration example, the data of a weather report are incorporated from the Internet, and it displays that this does not start images, such as a user's face, on the upper left portion of a screen, and time is displayed on the top-right-of-the-screen portion using the clock function of a computer 6. The information displayed here can be arbitrarily chosen by the user, for example, can also perform news, traffic information, the trend of a stock price, and also the display of reception mail.
[0028] Thus, while being able to regard one's face etc. as the picture seen from a user's 5 transverse plane being displayed on the mirror portion of a washstand 1, and seeing the mirror for a user Since various kinds of information can be displayed in the screen, when standing in front of this washstand by about [having got up in the morning, for example] and performing face washing, toothbrushing, makeup, etc., Since various information can be displayed on the simultaneously transverse-plane position by making a weather report into the start For example, many information, such as news, can be taken in at morning precious time by being the help in case it makes up according to WX of the day, and incorporating the information on news from the Internet etc. to a part for the information bureau of aforementioned WX. At this time, a loudspeaker can be prepared in this washstand and information can be taken in also with voice.
[0029] Moreover, a television receiver or a video player can be connected to this monitoring screen if needed, and the image of television broadcast by this monitoring screen by operation of a user now and the image of the video recorded further on videotape before can also be displayed. Furthermore, with the picture which is downloading and photoing the Internet information incorporated now if needed in

memory, such as a hard disk, it can input from the microphone which installed a user's message separately, and this can also be recorded on videotape to a video player. Moreover, when this message is a thing to the man of this house, it indicates that the above messages exist on the screen, and can also tell reproducing and seeing this to the partner who uses this washstand after that.

[0030] In case the above digital mirror equipments are actually attached in a washstand, it can attach in a mode as shown in drawing 3 . In the example shown in this drawing, in a washstand 1, the thin monitoring screens 2, such as plasma and liquid crystal, are conventionally arranged into the portion in which the mirror was attached, and it is considering as digital mirror equipment. Moreover, on both sides of this monitoring screen 2, the 1st visual sensor 3 and the 2nd visual sensor 4 are arranged, and the picture signal is inputted into computers, such as a personal computer which is not illustrated, and is outputting the signal by which the image processing was carried out there to the monitoring screen 2. In addition, this monitoring screen 2 is supported movable in the vertical direction, and is automatically set by recognition of the position of the face according to operation of a user or a visual sensor to the height of a user's back by the driving gear.

[0031] In the above equipments, can use in various modes especially by internal processing of the computer 6 of drawing 1 , for example, it centers on the picture of the transverse-plane sense of drawing 4 (b) in the image-processing section. As shown in this drawing (a), it can change into the image by the side of a user's diagonal left, or as are shown in this drawing (b), and shown in drawing 4 (c), it can change and display on the image by the side of a user's diagonal right, and it can use just like a 3rd page mirror.

[0032] And the angle at that time can be specified arbitrarily, can also be changed, automatically, can change the angle and can also display it in animation gradually if needed. Moreover, it enables it to make up easily by displaying a face to the limit of a screen, as shown in drawing 4 (d), and when expanding this further and drawing the attachment-and-detachment work of a contact lens, and an eyeliner, it can also consider as the assistance when doing fine work. When a user directs the arbitrary positions of a picture with a finger etc. at this time, a visual sensor can recognize this and can also expand the directed portion.

[0033] Moreover, since various information can be incorporated from Internet 8 grade as mentioned above, it enables it to perform each function in the data origination section 9 of a computer 6 by displaying the various icons of a screen caudad, as shown, for example in drawing 5 , and using this portion as the control unit by the touch panel. In addition, by operating each icon, this icon can also be displayed in multilayer form so that the following icon group may be displayed further. Moreover, it is also possible by the aforementioned visual sensor's detecting a user's visual axis, and discriminating any of these icons are seen for it to be made to perform various operations, without touching an icon. It is desirable to display somewhat greatly, to distribute then, again and to arrange an icon.

[0034] The example of a display containing an icon is shown in drawing 5 , and when displayed the transverse-plane picture of a user's face in the center of a screen, the icon is arranged in the position which the user of the screen bottom tends to operate, the left end according to icon is equipped with the icon of "health" in this example and a user operates this icon shows the example which displayed a user's healthy information on the upper left. In addition, as long as there are no directions especially in this example, sometimes, the example which always displays time information on the portion at the upper right of a screen which does not lap with the picture of a user's head is usually shown.

[0035] The above-mentioned healthy information detects automatically the respiration under sleep of a user, a pulse, the state of changing sides, the state of a stertor, etc. by no restraining to a user, and evaluates this data by the computer, it is the information which synthesized the each data or this and was acquired, and it shows the state as "fitness" while it displays a graph as a healthy general index in the example of drawing 5 .

[0036] In addition to this as an icon on a screen, it has the icon for giving directions to image processings, such as a picture rotated so that its left-hand side might be seen, a picture rotated so that right-hand side might be seen conversely, an expansion picture, and a broader-based picture which copies the latus range. In addition, in case the picture of its right and left is acquired as mentioned above, a screen is trichotomized, it can fix as a transverse-plane picture and a central screen can also rotate each picture about a screen on either side. Moreover, the icon of a "schedule" is prepared in the example of illustration and the display of a schedule on the day, a week schedule, etc. is enabled based on the data of an action schedule which the user inputted beforehand.

[0037] In addition, it enables it to incorporate the information on "WX", a "stock price", and "traffic" from the Internet in an illustration example, and enables it to also perform transmission of the mail from here the arrival of mail, and if needed further. It is also possible to recognize a user's face, when a user stands in front of a washstand about the transceiver function of such mail, and to perform screen display "with mail arrival" etc., when the user's unread mail has received a message.

[0038] moreover, mutual by transmitting a user's image to a specific partner, and displaying a partner's

image on the aforementioned whole monitor portion or its part similarly by the data transceiver function in which the Internet was used, -- it can also be used as a TV phone, carrying out image display so that it may be alike and a visual axis may be doubled The above Internet is used in that case, and also the data communication by the usual telephone line can also perform this as usual.

[0039] In an illustration example, the icon of "television" is prepared further, and while it enables it to display a television screen on this whole monitor or its part and a user works makeup, it enables it to watch the program which needs a news program etc. here. Furthermore, the icon of "video" can be prepared, while enabling it to watch the program recorded on videotape before here, the need can be accepted, for example, a user's message can be recorded on videotape and recorded like "take out and untie father and dust", there "there having been a telephone from Yoshifumi and Mr. 00", and there "there being already no food of mother and a dog", and this message can be told to the family who uses this washstand later. In that case, when the partner who tells a message like the above stands on this washstand, it can also tell that the face picture is recognized and there is a message.

[0040] this invention can be displayed by performing various image processings to a user's etc. picture by the image processing besides the above-mentioned example, for example, since it is also possible for not only a mirror image but right and left to display a picture as it is unlike the conventional mirror as for the above-mentioned picture When it senses that it is hard to use a user, this can be reversed and it can display, and further various information, such as reservation status of the ticket of a concert and bargain sale information on a department store, can be incorporated from the Internet etc., and it can display in various kinds of modes.

[0041]

[Effect of the Invention] Two or more visual sensors which obtain the image data of two or more directions of a user in invention concerning the claim 1 of this application, Since it considered as the digital mirror equipment characterized by the bird clapper from the image-processing section which acquires the picture of a user's specific sense with the data of the aforementioned visual sensor, and the monitoring screen which displays the picture from the aforementioned image-processing section Although the visual sensor is not photoing the picture of a user's transverse plane by carrying out the image processing of the data of a visual sensor arbitrarily, a front picture can be displayed, and their picture and visual axis can be doubled. moreover -- since various image data can be obtained by the image processing -- not only copying one's figure as it is but a three-way mirror function -- various functions, such as an expansion function, can be made to perform in part

[0042] moreover, in invention concerning a claim 2,. it is characterized by for the picture of the aforementioned user's specific sense being a user's transverse plane and picture of right and left, and displaying one or more of these simultaneously with directions of a user -- being according to claim 1 -- since digital mirror equipment was carried out, this digital mirror can be used like a three-way mirror

[0043] Moreover, in invention concerning a claim 3, since the picture of the aforementioned user's specific sense was used as the digital mirror equipment according to claim 1 which is the picture of the angle direction a user's four-directions arbitration, and is characterized by displaying the picture of arbitrary angles with directions of a user, a user can catch easily his a sight. [who saw from arbitrary angles]

[0044] Moreover, since it considered as the digital mirror equipment according to claim 1 characterized by invention concerning a claim 4 performing enlarged display processing of the particular part of a picture, or broader-based display processing, as for the aforementioned image-processing section, the fine work of drawing the handling of a contact lens and an eyeliner can be easily done by acquiring the expansion picture of a particular part with directions of a user.

[0045] Moreover, invention concerning a claim 5 equips the aforementioned visual sensor with two or more cameras. Since it considered as the digital mirror equipment according to claim 1 which compounds the picture photoed with each camera, considers as 3-dimensional image data, and is characterized by acquiring the picture of a user's specific sense by the aforementioned 3-dimensional image data from each visual sensor in the aforementioned image-processing section, exact picture composition processing can be performed. A picture with a user's arbitrary exact angles can be acquired.

[0046] Moreover, invention concerning a claim 6 transmits the picture from the aforementioned image-processing section to other image display equipments, and since it considered as the digital mirror equipment according to claim 1 characterized by displaying the picture from the image-processing section of a transmission place on the aforementioned monitoring screen, it can use this digital mirror equipment like a TV phone.

[0047] Invention concerning a claim 7 moreover, in the aforementioned image-processing section Since it considered as the digital mirror equipment according to claim 1 characterized by what data other than the aforementioned visual sensor are also inputted, and data other than the aforementioned visual sensor also carry out picture composition, and display on the aforementioned monitoring screen Various

information can be displayed on the mirror portion used periodically every day, and since the position is displayed on the transverse-plane portion which has copied out its figure while being able to acquire these information, without being conscious, especially a user can perform a legible information display. Moreover, various information can be displayed on the portion which does not have influence in its picture, and a deployment of a screen can also be aimed at. [of a monitoring screen]

[0048] Moreover, since invention concerning a claim 8 considered as the digital mirror equipment according to claim 7 characterized by data other than the aforementioned visual sensor being data incorporated from the Internet, it can incorporate arbitrarily its favorite information offered from the Internet, and can display this. [who changes every moment]

[0049] Moreover, data other than the aforementioned visual sensor can display these information that many users use since it considered as time, the weather, stocks, and the digital mirror equipment according to claim 7 characterized by being any one of each of the information on mail at least, and since these information that especially a user wants to know in the morning immediately is displayed, invention concerning a claim 9 can use them as a convenient digital mirror.

[0050] Moreover, since invention concerning a claim 10 used data other than the aforementioned visual sensor as the digital mirror equipment according to claim 7 which is the picture of television or video, it can display these pictures on the whole monitoring screen or its part, and can use them as convenient digital mirror equipment.

[0051] Moreover, since invention concerning a claim 11 considered as the digital mirror equipment according to claim 10 characterized by the picture of the aforementioned video being the message voice of the aforementioned user's picture, and a user, it can use the mirror portion used periodically every morning as a message board.

[0052] Moreover, since invention concerning a claim 12 considered as the digital mirror equipment according to claim 11 characterized by the aforementioned visual sensor outputting the information corresponding to the user who specified the user by a user's picture and was specified in the aforementioned image-processing section, a user can offer automatically information [as opposed to the user only at having stood in front of the washstand].

[0053] Moreover, since invention concerning a claim 13 considered as the digital mirror equipment of any one publication of the claim 1 characterized by having arranged the aforementioned monitoring screen in the mirror installation position of a washstand, or the claim 12, a user can see his image, and let it be the good mirror of availability. [who did variously the image processing of the washstand used daily as above digital mirrors] Moreover, in case various information is displayed to the digital mirror prepared in this washstand, a user can use the washstand used daily as an information offer means, and can make the function of other various kinds of a mere mirror function perform.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the system schematic diagram showing the example of the outline of the composition of the digital mirror by this invention and a photography picture, and a display image.
[Drawing 2] It is the operation flow view showing the operation outline of this invention.
[Drawing 3] It is a perspective diagram at the time of using the digital mirror of this invention for a washstand.
[Drawing 4] It is drawing showing the example which displayed the picture of various modes by the image-processing function of the digital mirror by this invention.
[Drawing 5] It is drawing showing the example which displays various information on the digital mirror by this invention.
[Description of Notations]
1 Washstand
2 Monitoring Screen
3 1st Visual Sensor
4 2nd Visual Sensor
5 User
6 Computer
7 Image-Processing Section
8 Internet
9 Data Origination Section
10 Operation Input Section

[Translation done.]